

Sound

An Introduction

Adding life to your layout

Larry's Page

Simple Pendulum

$$\omega = \sqrt{\frac{g}{L}}$$

$$\theta = \theta_{\max} \cos(\omega t - \phi)$$

Traveling Waves

Longitudinal, Transverse

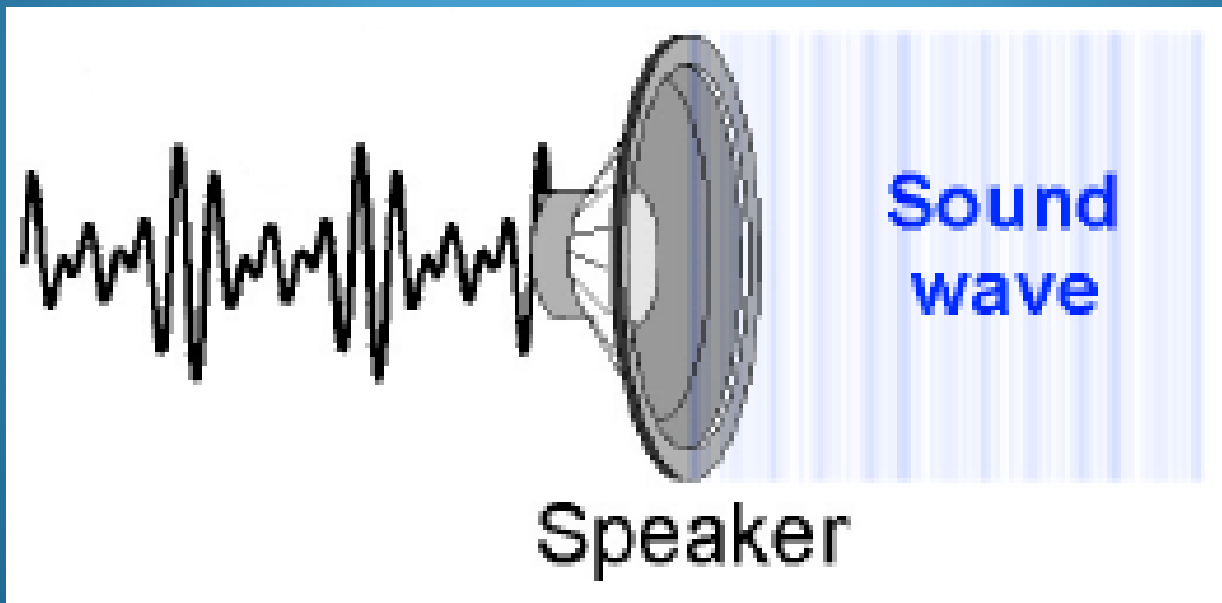
Sinusoidal wave

$$y = A \cos \left[2\pi \left(\frac{x}{\lambda} - ft \right) - \phi \right]$$

Speed, frequency, wavelength

$$v = f\lambda$$

What were looking for:



This car got me interested in sound



Broadway Limited HO Stock Car with sound

The simplest way to add layout sound

Buy a sound card from:

Dallee Electronics

ITTC

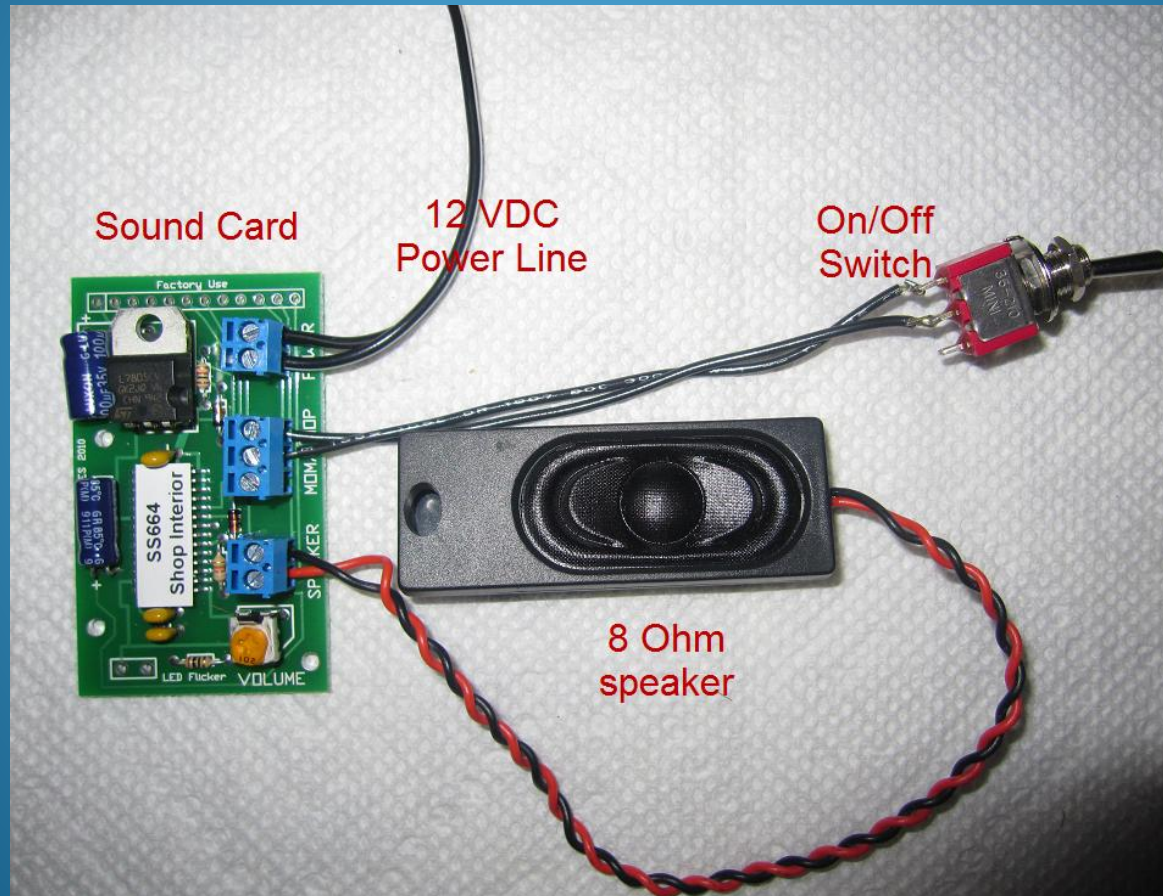
Ram Track

You will also need:

12 VDC power supply

8 Ohm speaker < 4 inches

Typical Sound card setup



If you want more than a
30 second sound-bite
then the first step in a
sound project is to find
the sounds you like

I started with:

FantaSonics.com

FantaSonics.com



Welcome to the Model Railroad Magic Website!

Our website is dedicated to the magic of scale sound and sound driven special FX.



Our Products & Services



The Old Free Website

Artwork by Dan Sawatzky

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FantaSonics.com

The screenshot shows a web browser window with the address bar displaying "www.fantasynics.com/store/cd.html". The page title is "Scale Magic CD Soundtracks". The navigation bar includes links for "[Scale Magic™ CD Soundtracks]", "[Scale Magic™ Dream Player]", "[PRICOM Design products]", "[RailRoadies™ Scale Sound Services]", and "[Creative FX Book]".

The main content area features the following text:

52 individual R-T-R model railroad scenes... and counting!
Each CD contains over an hour of continuous, hand made 'scale sound scenery', scratch built for a specific scale model railroad scene.

Sounds HUGE no matter how quietly you play it back!
Sounds REAL at any scale volume!
Three dimensional imaging appears real from every angle!

Hearing is believing, click on any scene title below, TURN IT DOWN!, and listen for yourself...

CD's are available in the following scenes:

Rural

- [Way Side Station](#)
- [The Old West \(2 CD set!\)](#)
- [The Slightly Newer West \(2 CD set!\)](#)
- [Small Time Mine Operation](#)
- [Farm/Ranch](#)
- [Wild West Saloon](#)
- [Quaint Fishing Harbor](#)
- [Waterfalls & Rivers](#)
- [Streams & Creeks](#)
- [Day & Night \(mountain\)](#)
- [Day & Night \(prairie/desert\)](#)
- [Four Corners \(dawn/day/dusk/night\)](#)
- [Lakes & Ponds \(2 CD set!\)](#)
- [Swamp/Marsh/Bayou](#)

Urban

- [Big City \(turn of the last century\)](#)
- [The Big City \(roaring 20's & 30's\)](#)
- [Big City \(Transition Era\)](#)
- [Big City \(modern, diesel\)](#)
- [Big Port Harbor \(turn of the last century\)](#)
- [Big Port Harbor \(WWII, big steam\)](#)
- [Big Port Harbor \(modern, diesel\)](#)
- [International Seaport](#)
- [Roundhouse/Switch Yard \(turn of the last century\)](#)
- [Roundhouse/Switch Yard \(WWII, big steam\)](#)
- [Roundhouse/Switch Yard \(modern, diesel\)](#)

Big City Station (turn-of-the-century) New!

Big City Station (transition era) New!

Big City Station (modern) New!

Small Town Station (turn of the last century) New!

Small Town Station (early 1900's) New!

Small Town Station (late 1900's) New!

Industry

- [Stamp Mills, 5, 10 & 20 stamps](#)
- [Saw Mill \(pre 1920's, steam powered\)](#)
- [Logging Camp \(pre 1920's\)](#)
- [Logging Operations \(pre 1920's\)](#)
- [Popp's Paper Products \(paper mill\)](#)
- [The Big Industry!](#)
- [Two \(or possibly three\) Factories](#)
- ['Steam' Wood Factory](#)
- ['Electric' Wood Factory](#)
- [Big Time Mine](#)
- [The Roundhouse Series \(2 CD set!\)](#)
- [The Waterfront Series \(2 CD set!\)](#)
- [Old Time Mining Ops \(steam\)](#)
- [Old Time Mining Ops \(electric\)](#)
- [Riley's feed & Grain \(rural elevators\)](#)
- [The Big Elevators](#)
- [Railside Stockyards \(2 CD set\)](#)
- [The Warehouse District New!](#)
- [The Refinery New!](#)

FantaSonics.com

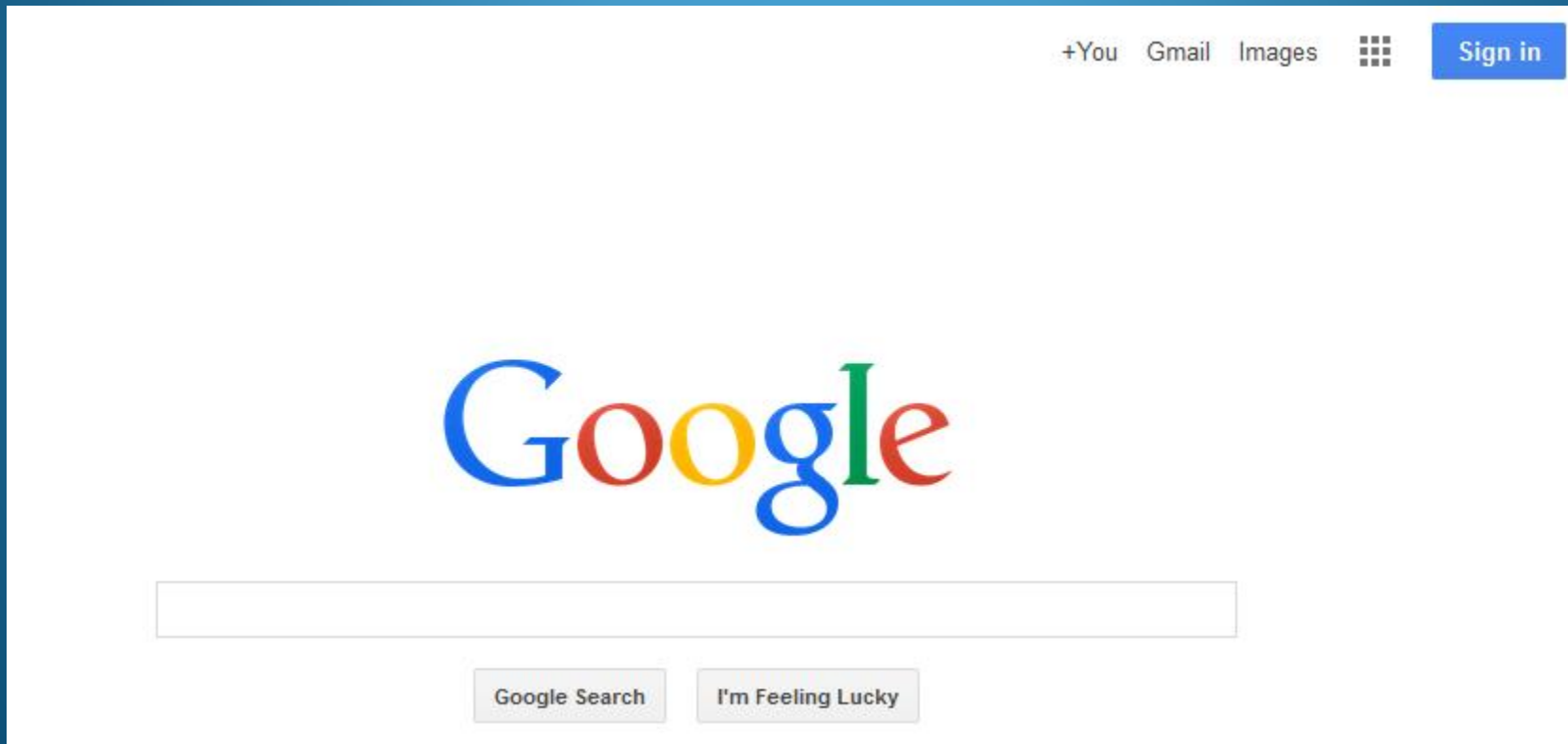
Unfortunately, Jim Wells passed away
December 2024.

If anyone knows if someone has taken over
up his sounds files and is making them
available, PLEASE LET ME KNOW.

I have seen some of the soundtracks CDs
sold on ebay



Google and YouTube are your friends


www.google.com




Google:

Blacksmith shop sound effect

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About 116,000 results (0.19 seconds)

Blacksmith shop sound effect - YouTube
 www.youtube.com/watch?v=0CUbleaCXIo
Mar 9, 2012 - Uploaded by Jojikiba
CLICK HERE for MORE VIDEOS! <http://www.youtube.com/jojikiba>
Please see the "About" section of the ...

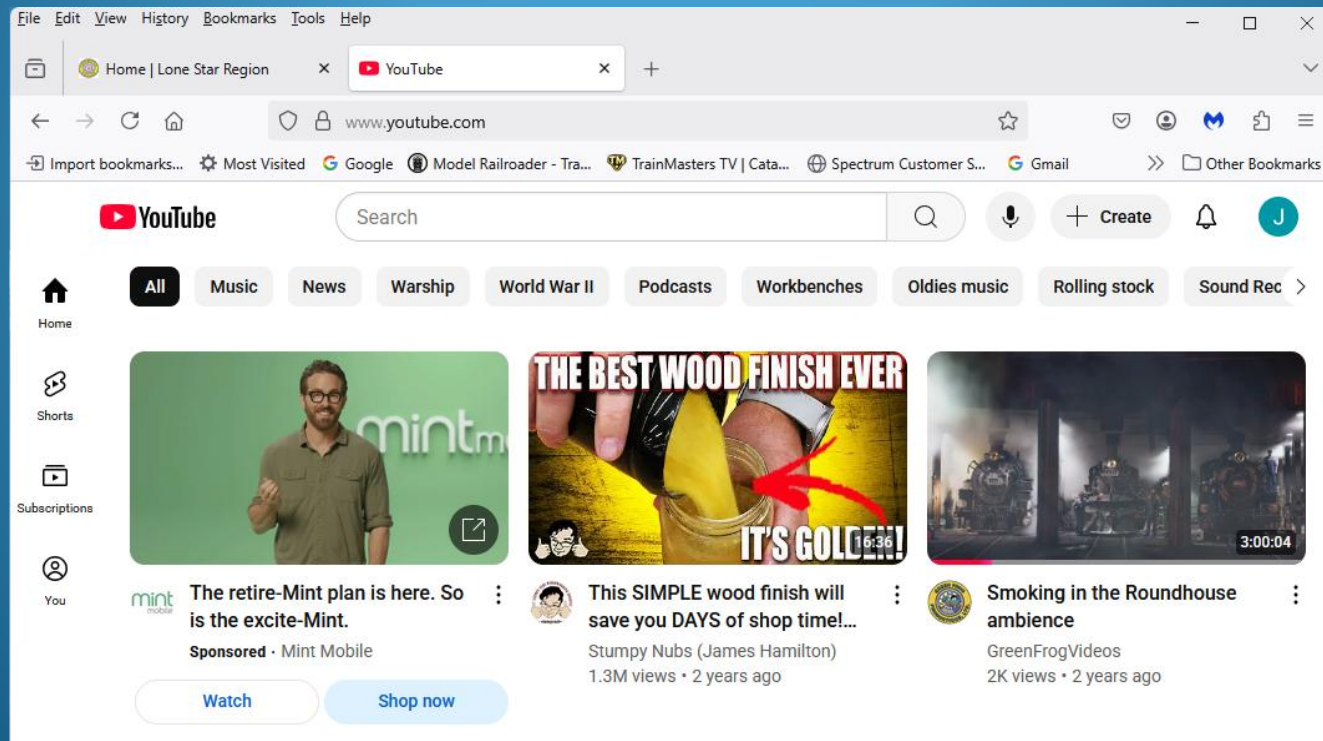
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[https://www.sounddogs.com/results.asp?Type=1&CategoryID...5 ▾](https://www.sounddogs.com/results.asp?Type=1&CategoryID...5)
Click here to order this **Sound Effects** or Production Music Track. ... Metal -
Blacksmith Shop - Medium Close Up - Hammering Horseshoe On Anvil, 26, \$3.51.

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Sound Effects and Production Music Preview, Metal - **Blacksmith Shop** ...

Blacksmith Sounds
www.soundsnap.com/tags/blacksmith ▾

YouTube:

www.youtube.com



YouTube:

Blacksmith shop sound effect

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www.youtube.com/watch?v=yufvnBL8lho

Import bookmarks... Most Visited Google Model Railroad - Tra... TrainMasters TV | Cata... Spectrum Customer S... Gmail Trains - Peter Loughlin Online Video Library | lone star region nmra ... NMRA Magazine Other Bookmarks

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The Blacksmith's Shop | D&D Soundscape | 1 hour

Realmwalker - D&D Soundscapes 744 subscribers **Subscribe**

290 290 290 Share Clip Save

23K views 3 years ago #dnd #trpg #soundscapes

Burning fireplace and crackling fire sounds (no music) Tranquil Vibes 70 views • 6 days ago New 20:27

Frozen in Time - Dystopian Dark Ambience - Meditative Dark... Eternal Dystopia 414K views • 11 months ago 1:00:01

Footsteps Walking on Concrete | HQ Sound Effects Everyday Cinematic Sounds 479K views • 4 years ago 0:53

16 minutes of beautiful fire for falling asleep. #asmr #fire Fuego ASMR 179 views • 9 days ago 16:32

1 Hour of Soothing Fireplace Sounds | 1 Година... Long Quiet Moments 66 views • 13 days ago 1:00:01

Medieval City | Realistic Ambience | 1 Hour #dnd Michael Ghelfi Studios 1.2M views • 6 years ago 1:00:01

Halls of the Academy | D&D Soundscape | 1 hour Realmwalker - D&D Soundscapes 927 views • 3 years ago 1:00:01

Shopping list of sounds

- 1) Forge – steam era – bellows
- 2) Hammering metal - anvil
- 3) Hissing of hot metal in water
- 4) Maybe the sound of shoeing a horse
- 5) Maybe people and animal sounds

Shopping list of sounds

- 1) Checkout “sleep aid sounds” for background sounds – streams, birds, nature
- 2) Pixabay.com
- 3) Google “BBC Sound Effects”
- 4) Google the sound you want to record

How to trap and record

I use my computer

New terms: **Line level** is the specified strength of an audio signal used to transmit analog sound between audio components such as CD and DVD players, television sets, audio amplifiers, and mixing consoles. This is an industry standard. See also:

Line-in

Line-out



How to trap and record

I used to use Line-out jumpered to line-in

A jumper set of stereo 3.5mm jacks will allow you to route the output sound (Line-out) back into your computer (Line-in) for capture and processing.



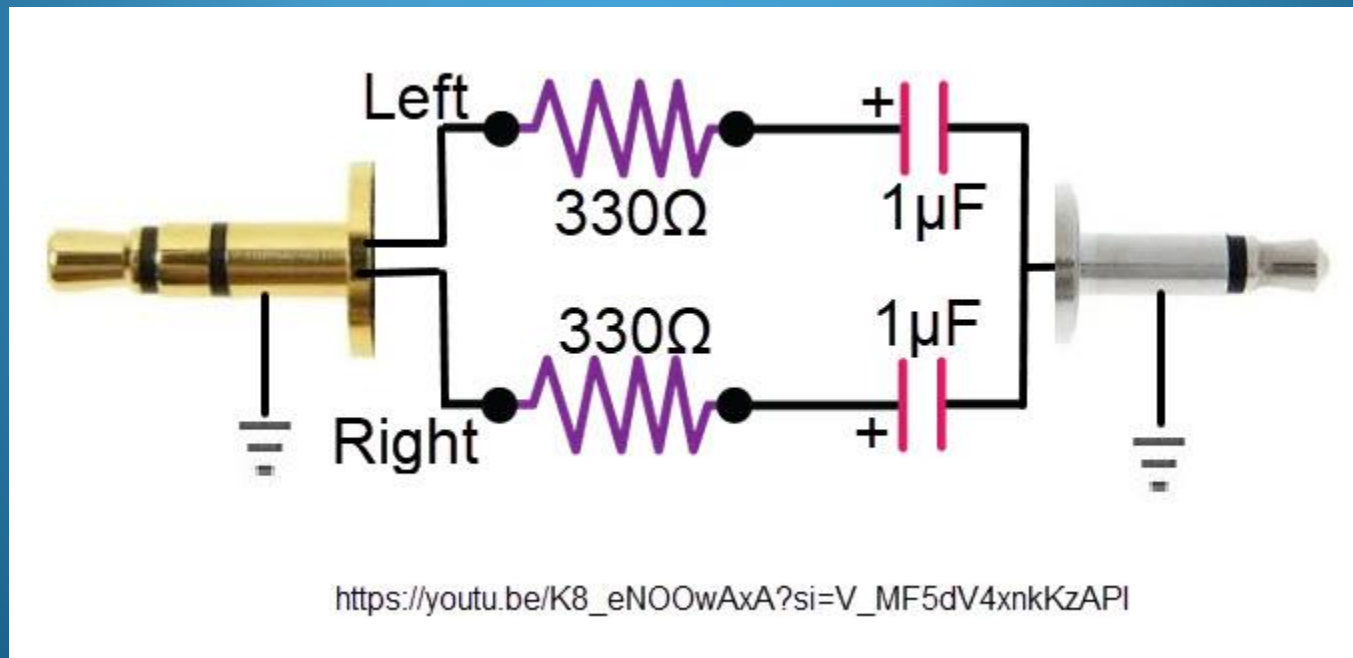
Since Windows 7, all you need to do is play the sound track and capture it. I'll show you how in a couple of more slides.

How to trap and record - con't

Prior to Windows 7 –

Jumper Line-out to Mic using the circuit

Using this information, I searched the internet for a circuit and found:

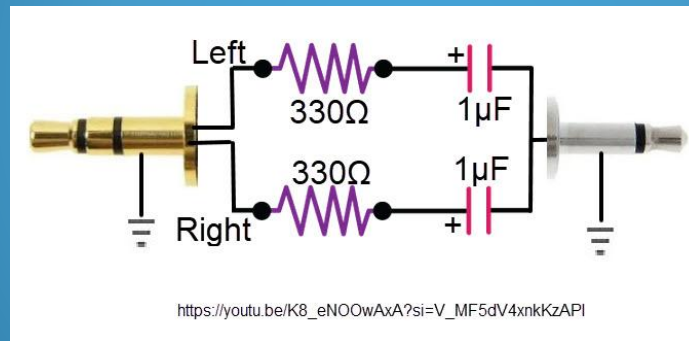


How to trap and record - con't

Prior to Windows 7 –

Jumper Line-out to Mic using the circuit

Using this information, I searched the internet for a circuit and found:



Notes: The above circuit is based on the following -

Line-out voltage is 1.0 volts

Microphone voltage is 0.1 volts

How to trap and record

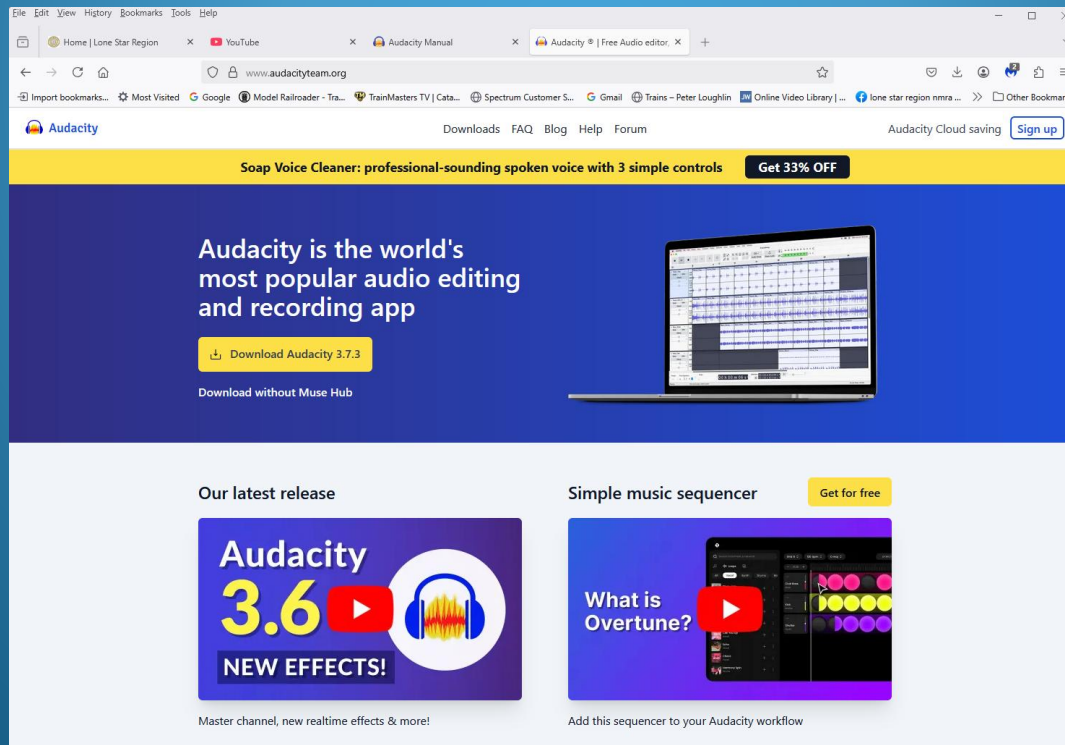
I use my computer

This converter allowed me to take the speaker out (stereo) and feed it back into the microphone port (mono) and record it. The first version was built in a tiny box.

How to trap and record

I use my computer

You need some software to capture the sound files. I use [Audacity](#). It's free, and it has a lot of mixing capabilities.



The screenshot shows the Audacity website homepage. At the top, there's a navigation bar with links for Downloads, FAQ, Blog, Help, and Forum. Below this is a yellow banner for 'Soap Voice Cleaner' with a 'Get 33% OFF' button. The main section features the text 'Audacity is the world's most popular audio editing and recording app' next to a laptop displaying the Audacity interface. A yellow button labeled 'Download Audacity 3.7.3' is present, with a link to 'Download without Muse Hub' below it. The bottom section is divided into two columns. The left column, titled 'Our latest release', features a purple box with 'Audacity 3.6' and 'NEW EFFECTS!' text, accompanied by a play button icon and a waveform icon. Below this is the text 'Master channel, new realtime effects & more!'. The right column, titled 'Simple music sequencer', has a yellow 'Get for free' button and a purple box with 'What is Overtune?' text, a play button icon, and a screenshot of the sequencer interface. Below this is the text 'Add this sequencer to your Audacity workflow'.

File Edit View History Bookmarks Tools Help

Home | Lone Star Region x YouTube x Audacity Manual x Audacity | Free Audio editor x

www.audacityteam.org

Import bookmarks... Most Visited Google Model Railroader - Tra... TrainMasters TV | Cata... Spectrum Customer S... Gmail Trains - Peter Loughlin Online Video Library | ... lone star region nmra ... Other Bookmarks

Audacity Downloads FAQ Blog Help Forum Audacity Cloud saving Sign up

Soap Voice Cleaner: professional-sounding spoken voice with 3 simple controls Get 33% OFF

Audacity is the world's most popular audio editing and recording app

Download Audacity 3.7.3

Download without Muse Hub

Our latest release

Audacity 3.6 NEW EFFECTS!

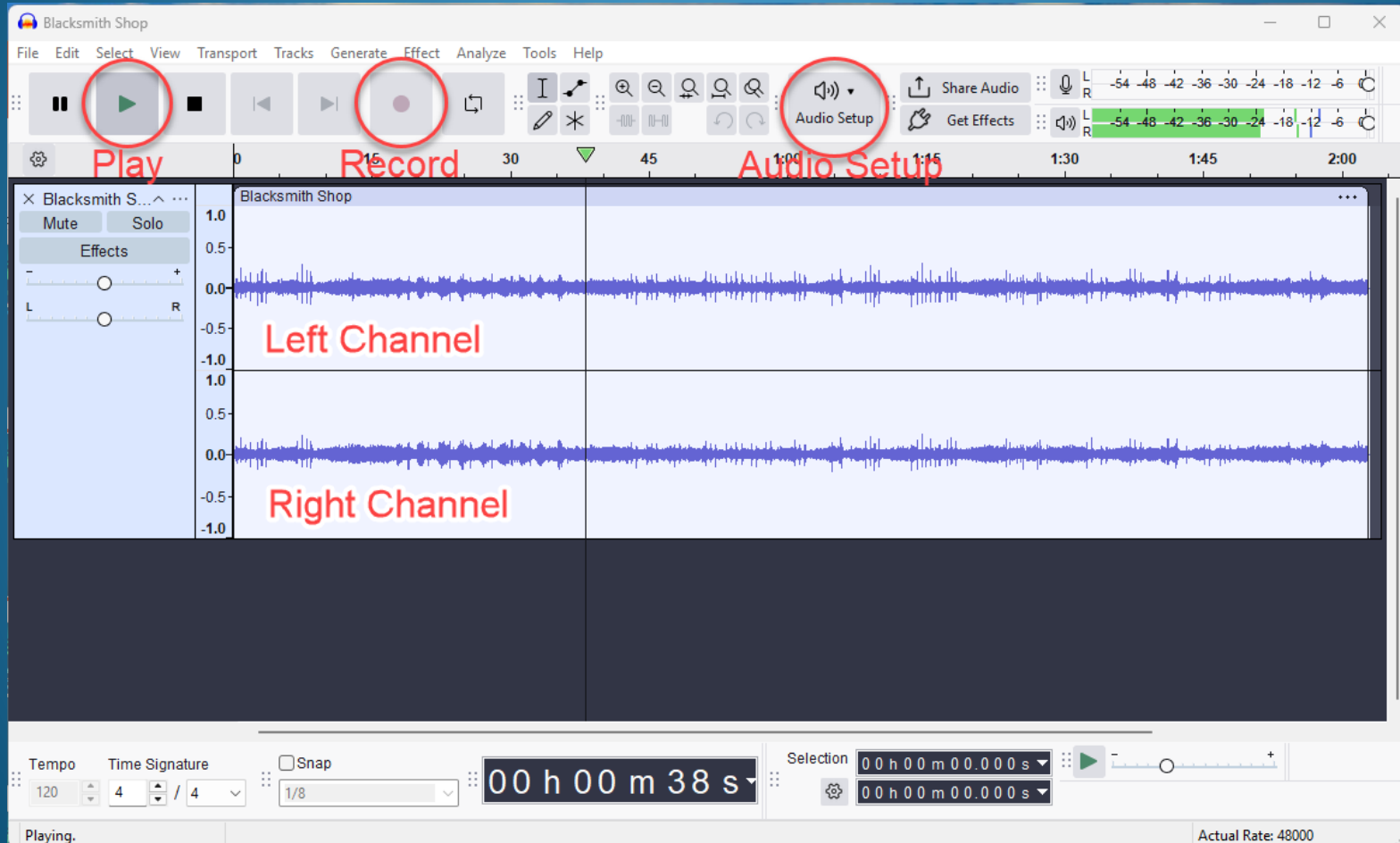
Master channel, new realtime effects & more!

Simple music sequencer Get for free

What is Overtune?

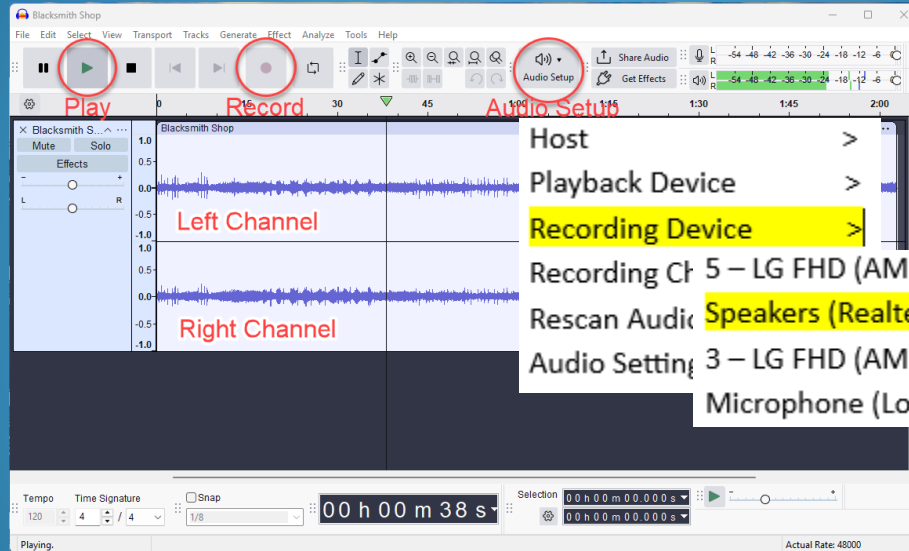
Add this sequencer to your Audacity workflow

How to trap and record



How to trap and record

To capture the sound being played/streamed, do the following:

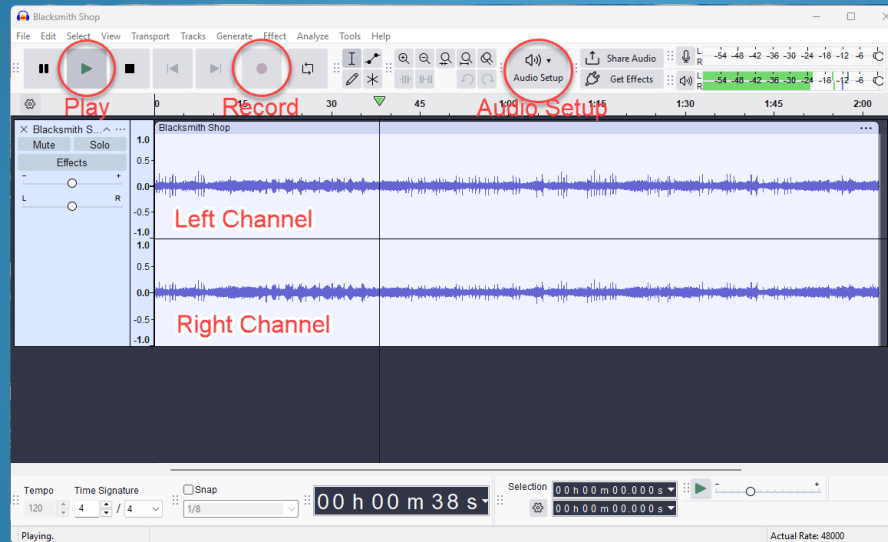


1. Select Audio Setup
2. Select Recoding Device
3. Select Speakers

Now Audacity is ready to record

How to trap and record

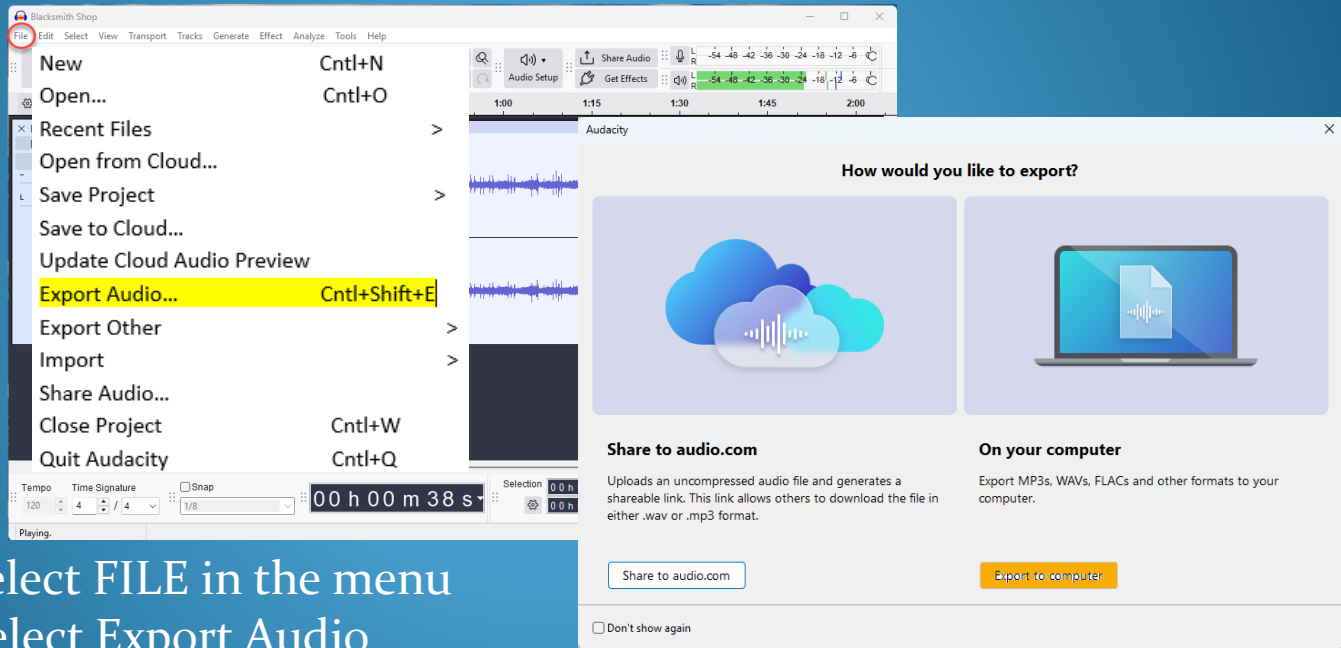
To capture the sound being played/streamed, continue to do the following:



4. Select Record
5. Play the audio file you want to capture
6. Push STOP to end recording
The button to the right of PLAY

How to trap and record

To save the captured sound file Continue to do the following:

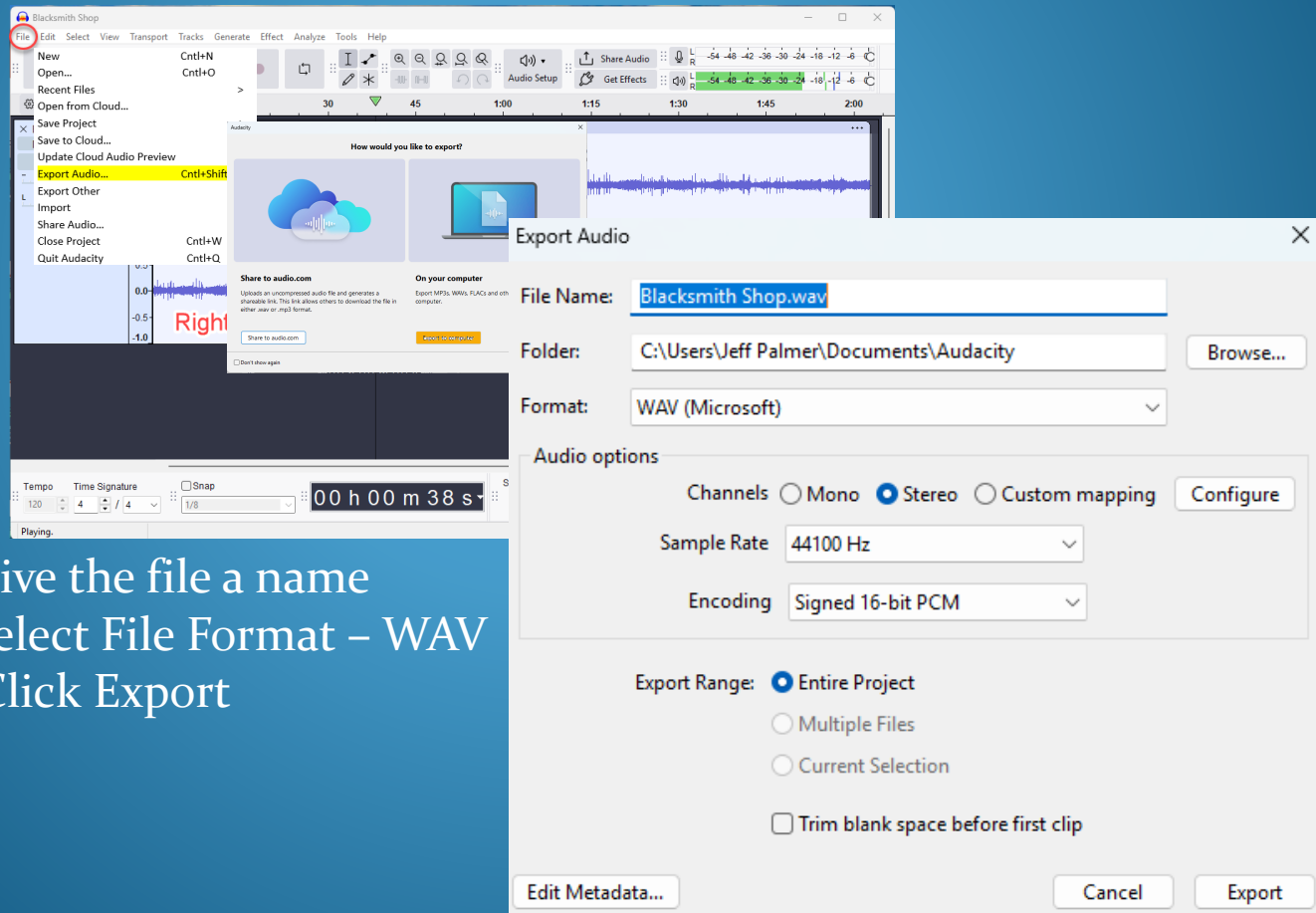


7. Select FILE in the menu
8. Select Export Audio
9. Select - On your computer

How to trap and record

To save the captured sound file continue to do the following:

10. Give the file a name
11. Select File Format – WAV
12. Click Export



You have now saved your sound file

Replaying your recording

If you look closely at the ROM provided by ITTC, Dallee... you can't alter the recording on the sound card. There is one company, Pricom, that allows you to record your sound on micro SD cards and play them

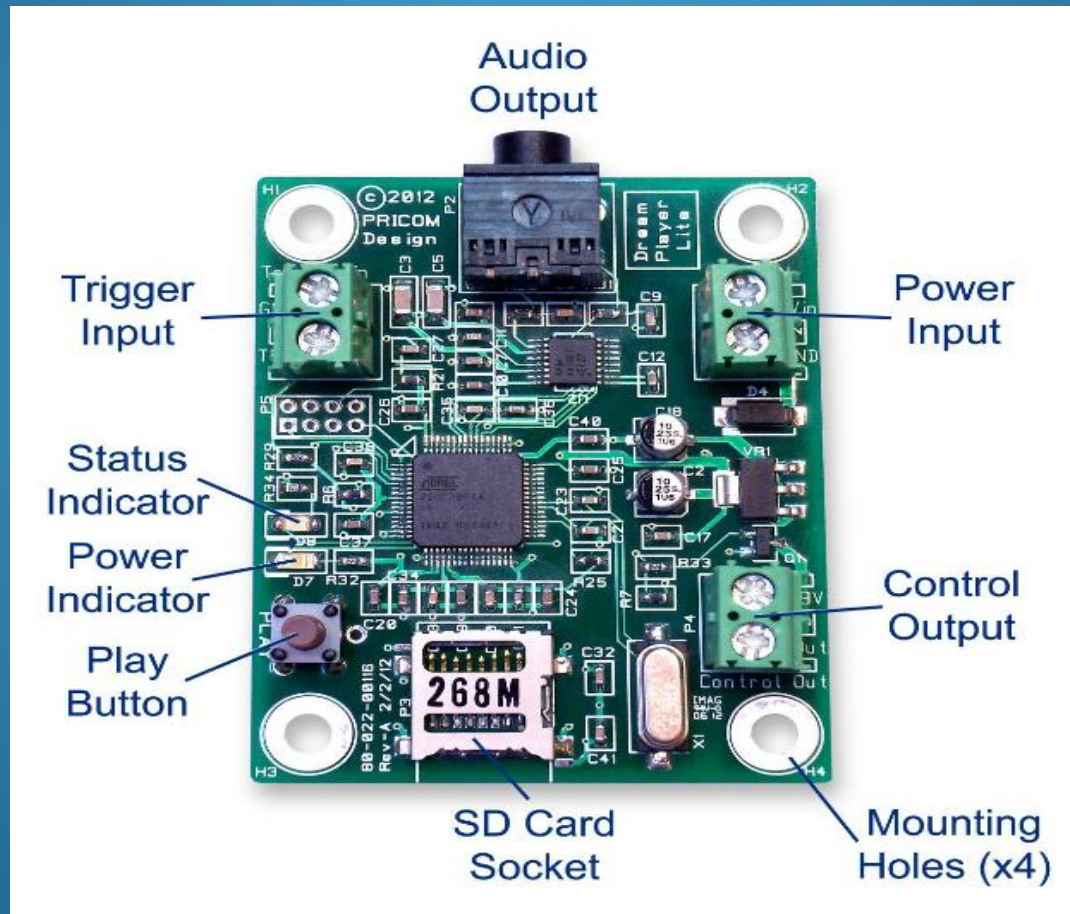


Replaying your recording

Since many PCs come with SD card ports, the process to get the new created sound file to the player is a simple COPY. If your computer does not have an SD port, you can obtain a port which is a USB extension.



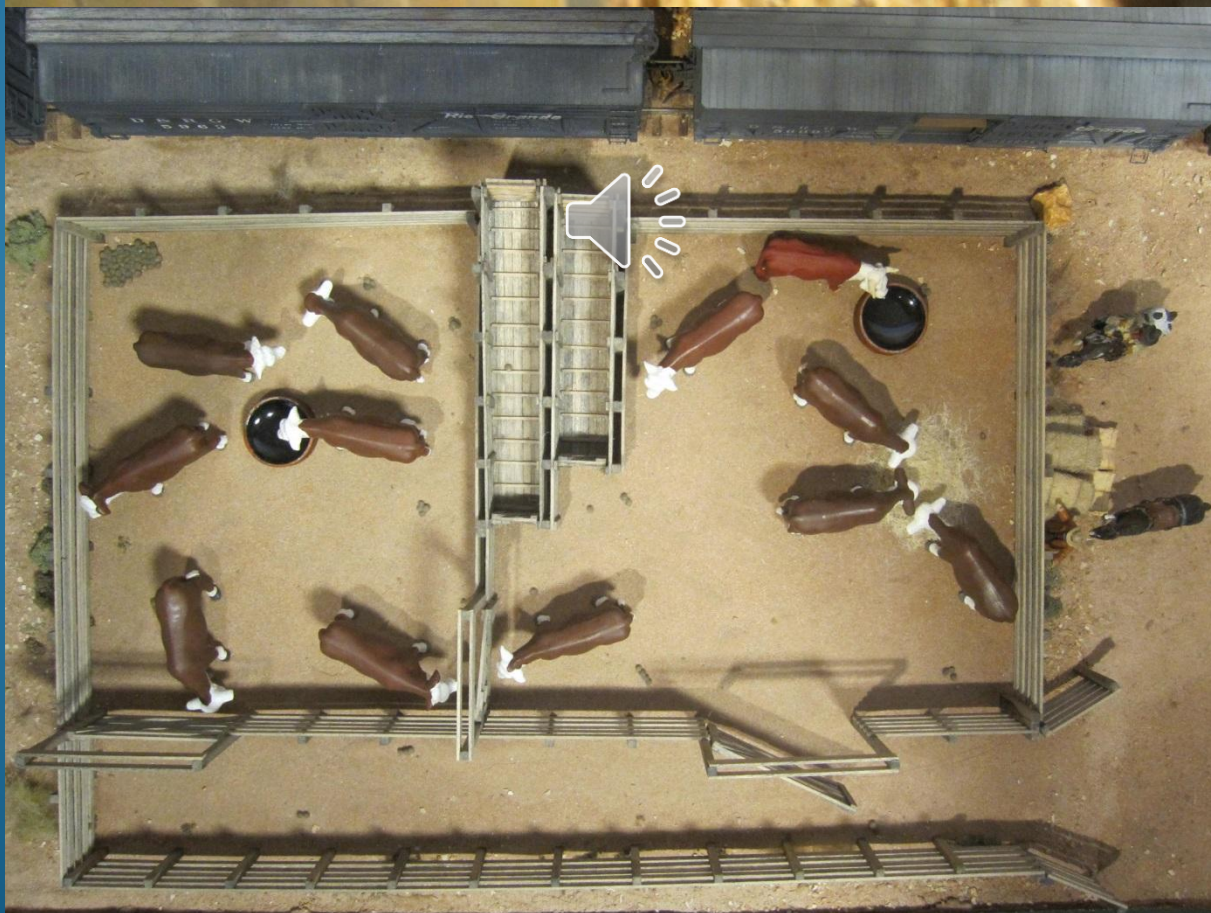
Replaying your recording



Pricom Dream Player LITE

Add sounds to these scenes

Railside Stockyard



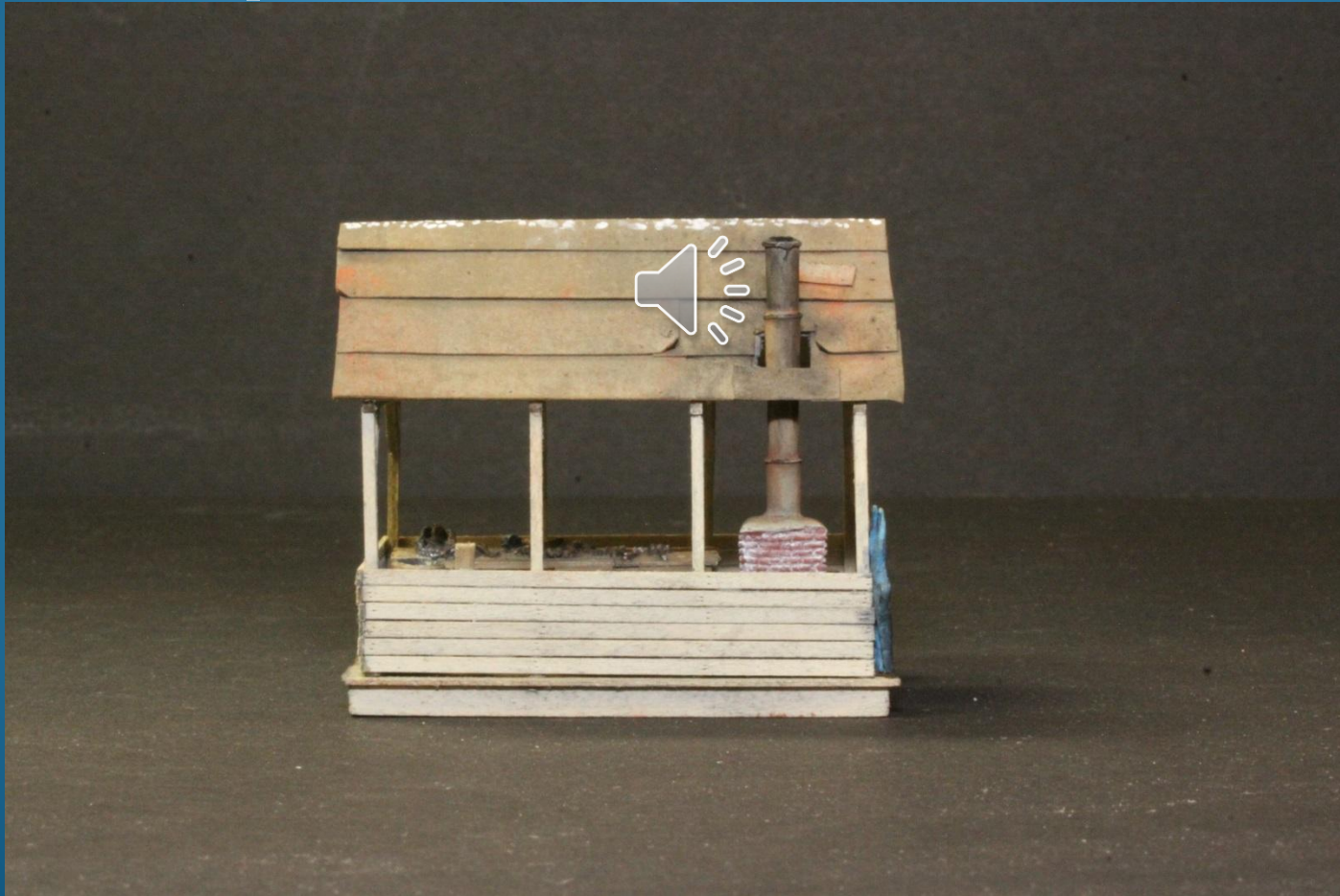
Add sounds to these scenes

Engine house



Add sounds to these scenes

Blacksmith shop



Questions?

Possible Future Topics

How to download, install, setup, and/or use Audacity

How to capture audio from a record, tape, or other audio device

Planning your sound scene

Mixing and recording sounds using Audacity

Thank you!

If there are areas where you would like more information or another clinic, let Marc LaChey, Jerry Hoverson, or Larry Swigert know.

Jeff Palmer, MMR